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Doxorubicin: The dogma and the bone

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Doxorubicin is an anthracycline drug used as frontline chemotherapy of osteosarcoma among other types of cancers. While quite effective in providing a good control over the tumours in some patients, it can cause significant toxicity to organs such as the heart [1]. Attempts to ameliorate this toxicity with agents such as dexrazoxane have been successful, but not without complications [2] as will be discussed in this talk. Pigment epithelium-derived factor (PEDF), a potent anti-angiogenic and osteogenetic protein [3], was used to reduce this side-effect, together with an analysis of levels of adenosine triphosphate (ATP) and reactive oxygen species (ROS). The effects of low dose doxorubicin in a clinically relevant dosing model will be discussed.

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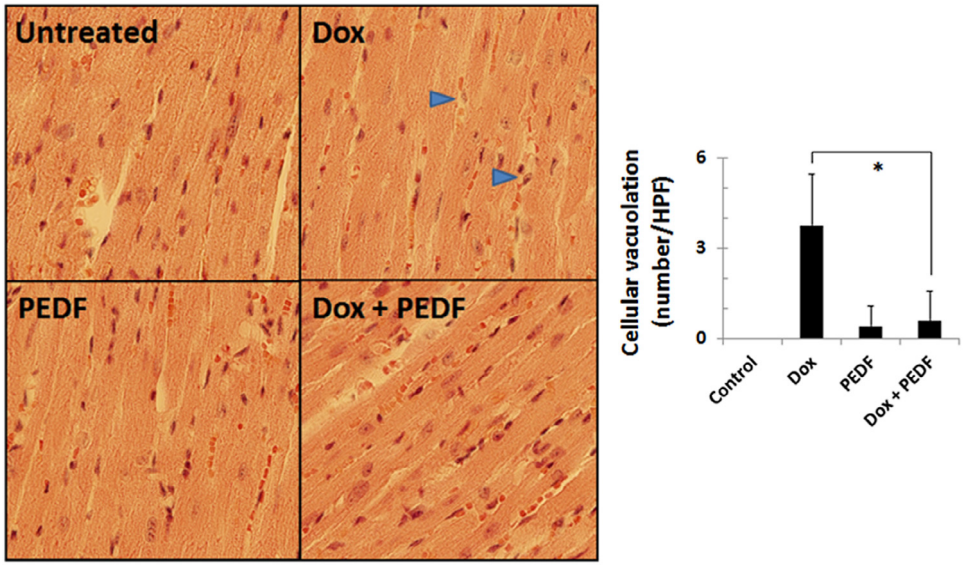

Fig. 1 PEDF reduces extent of doxorubicin-induced cellular vacuolation in cardiomyocytes.

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